

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A wear resistant member, comprising:

a ~~silicon nitride sintered body~~;

~~wherein the~~ silicon nitride sintered body ~~comprises~~ including from 75 to 97% by mass of silicon nitride, from 0.2 to 5% by mass of particles of titanium nitride ~~having a long axis of 1 μ m or less~~ and from 2 to 20% by mass of a grain boundary phase comprising a Si-R-Al-O-N compound, where R is a rare earth element;

wherein the particles of titanium nitride have a long axis of 0.04 μ m or more and 1 μ m or less, and at least 80% by volume of the particles of titanium nitride have an aspect ratio in the range of from 1.0 to 1.2.

Claim 2 (Previously Presented): The wear resistant member as set forth in claim 1:

wherein the particles of titanium nitride are dispersed in the silicon nitride sintered body as single particles.

Claim 3 (Original): The wear resistant member as set forth in claim 1:

wherein the titanium nitride is not dissolved in the silicon nitride and the grain boundary phase as a solid solution.

Claim 4 (Previously Presented): The wear resistant member as set forth in claim 1:

wherein the particles of titanium nitride are dispersed in the grain boundary phase.

Claims 5-6 (Cancelled).

Claim 7 (Original): The wear resistant member as set forth in claim 1:

wherein the particles of titanium nitride each have a roundish shape.

Claim 8 (Previously Presented): The wear resistant member as set forth in claim 1:

wherein the silicon nitride sintered body has a porosity of 0.5% or less and a maximum pore diameter of 2 μ m or less.

Claim 9 (Previously Presented): The wear resistant member as set forth in claim 1:
wherein the silicon nitride sintered body has a three point flexural strength of 1000 MPa or more and a fracture toughness of $6.5 \text{ MPa}\cdot\text{m}^{1/2}$ or more.

Claim 10 (Previously Presented): The wear resistant member as set forth in claim 1:
wherein, the wear resistant member has a rolling fatigue life of 1×10^8 times or more
when tested with a thrust bearing testing machine, under the conditions of opponent material
of a SUJ2 steel ball provided by JIS G4805, a load of 39.2 MPa, and a number of rotation of
1200 rpm, and the rolling fatigue life is measured until a surface of the wear resistant member
is peeled off.

Claim 11 (Previously Presented): The wear resistant member as set forth in claim 1:
wherein the wear resistant member comprises a ball member.

Claim 12 (Currently Amended): The wear resistant member as set forth in claim 11:
wherein the ball member has a crushing strength of 200MPa or more and a fracture toughness of $6.5 \text{ MPa}\cdot\text{m}^{1/2}$ or more.

Claim 13 (Previously Presented): The wear resistant member as set forth in claim 11:
wherein, the ball member has a rolling fatigue life of 400 hr or more when tested with
a thrust bearing testing machine, under the conditions of opponent material of a SUJ2 steel
plane table provided by JIS G4805, a maximum contact stress of 5.9 GPa, a ball, and a
number of rotation of 1200 rpm, and the rolling fatigue life is measured until a surface of the
ball member is peeled off.

Claim 14 (Previously Presented): The wear resistant member as set forth in claim 1:
wherein the grain boundary phase comprises from 0.5 to 10% by mass of a rare earth
element in terms of oxide, from 0.1 to 5% by mass of aluminum oxide and 5% by mass or
less of aluminum nitride.

Claim 15 (Previously Presented): The wear resistant member as set forth in claim 1:

wherein the silicon nitride sintered body further comprises at least one element selected from the group consisting of magnesium, zirconium, hafnium and tungsten in the range of from 0.1 to 5% by mass in terms of oxide.

Claim 16 (Original): The wear resistant member as set forth in claim 1:

wherein the wear resistant member is rolling bearing member.

Claim 17 (Withdrawn): A method of manufacturing the wear resistant member of claim 1, comprising the steps of:

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mixing silicon nitride powder comprising 1.7% by mass or less of oxygen and 90% by mass or more of α -silicon nitride having an average particle diameter of 1.0 μm or less, from 0.5 to 10% by mass of a rare earth compound in terms of oxide, from 0.1 to 5% by mass of titanium nitride having an average particle diameter of 0.7 μm or less or a titanium compound that forms titanium nitride by sintering in terms of titanium nitride, from 0.1 to 5% by mass of aluminum oxide and 5% by mass or less of aluminum nitride, thereby providing mixture of raw materials;

molding the mixture of raw materials into a desired shape;

heat treating, after degreasing the molded body obtained after said molding, at a temperature in the range of from 1300 to 1450°C; and

sintering the heat-treated molded body at a temperature in the range of from 1600 to 1900°C.

Claim 18 (Withdrawn): The method of manufacturing a wear resistant member as set forth in claim 17:

wherein the mixture of raw materials is added in a plurality of portions to the silicon nitride powder, the titanium nitride or the titanium compound that forms titanium nitride due to the sintering.

Claim 19 (Withdrawn): The method of manufacturing a wear resistant member as set forth in claim 17:

wherein the mixture of raw materials contains titanium oxide powder having an average particle diameter of 0.5 μm or less in the range of from 0.1 to 5% by mass in terms of titanium nitride.

B1 Cont Claim 20 (Withdrawn): The method of manufacturing a wear resistant member as set forth in claim 17, further comprising a step of:

carrying out a HIP treatment under a pressure of 300 atm or more in a non-oxidizing atmosphere at a temperature in the range of from 1600 to 1850°C.

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by, in effect, incorporating the subject matter of Claim 5 therein, and that the particles of titanium nitride have a long axis of 0.04 μm or more, as supported in the specification at, for example, embodiments 27 and 34 in Table 6 at page 43. Claims 5 and 6 have been cancelled. Claim 12 has been amended to correct a typographical error.

No new matter has been added by the above amendment. Claims 1-4 and 7-16 are now active in the application. Claims 17-20 stand withdrawn from consideration.